

REMARKS/ARGUMENTS

Applicant has received the Office action dated July 12, 2006, in which the Examiner: 1) rejected claims 1-4, 6-10, 12-14 and 16-19 under 35 U.S.C. § 102(e) as being anticipated by Mardilovich et al. (U.S. Pub. No. 2004/0081878, hereinafter "Mardilovich"); 2) rejected claims 1, 2, 6-8, 21 and 25-29 under 35 U.S.C. § 102(e) as being anticipated by Thirukkvalur (U.S. Pub. No. 2005/0048343, hereinafter "Thirukkvalur"); 3) rejected claims 5, 11, 15 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Mardilovich; and 4) rejected claims 22-24 under 35 U.S.C. § 103(a) as being unpatentable over Thirukkvalur in view of Mardilovich. With this Response, Applicant amends claims 1, 7, 8, 16, and 21 and cancels claims 2 and 18.

I. STATUS OF MARDILOVICH AND THIRUKKVALUR AS PRIOR ART

The Examiner has concluded that both of the Mardilovich and Thirukkvalur references comprise "prior art" under 35 U.S.C. § 102(e). Both Mardilovich and Thirukkvalur are owned by Hewlett-Packard Company. The present application is also owned by Hewlett-Packard Company. Thus, the Mardilovich and Thirukkvalur references comprise 102(e) art that has commonly owned with the present application. Per 35 U.S.C. § 103(c)(1), neither Mardilovich nor Thirukkvalur can be used in an obviousness rejection of any of the present claims. For at least this reason, the Examiner's obviousness rejections of claims 5, 11, 15, 20, and 22-24 is improper.

II. THE CLAIM REJECTIONS

The Examiner rejected claim 1 as separately anticipated by Mardilovich and Thirukkvalur. Applicant amends claim 1 to require that "at least the anode and cathode materials of the fuel cell stack layer have peaks and valleys thereby defining passageways between the stack and the substrate." Neither Mardilovich nor Thirukkvalur teaches this limitation. Mardilovich discloses gas flow channels 26 formed within the fuel cell stack (see e.g., Fig. 1), not between the stack and the substrate. Thirukkvalur discloses a substantially flat assembly of anode and cathode materials of a fuel cell stack (see e.g., Fig. 1). Thirukkvalur discloses an embodiment in Fig. 9 in which a current collector 104 on which the anode and

cathode reside. The current collector 104 in Fig. 9 has channels formed therein. Thus, Thirkkvalur does not disclose that the anode and cathode materials have peaks and valleys thereby defining passageways. For at least these reasons, claim 1 is not anticipated by Mardilovich or Thirkkvalur. Further, neither reference can be used to render obvious claim 1. Accordingly, claim 1 and all claims dependent thereon are in condition for allowance.

Amended claim 7 is allowable for the same or similar reason as for claim 1. All claims dependent from claim 7 are also patentable for at least the same reason as claim 7.

Claim 12 requires a "means for passing a separated fuel stream and an oxygen containing stream over the fuel cell stack on the same side of the substrate." This limitation is written in a format that invokes 35 U.S.C. § 112, sixth paragraph. As the Examiner is no doubt aware, such a limitation is limited the structure disclosed in the specification that performs the claimed function as well as structure that is equivalent to such structure. Applicant's structure discloses a fuel cell stack comprising anode, cathode, and electrolyte materials formed in a configuration having peaks and valleys that define the flow passageways between the stack and an underlying substrate. No such structure is disclosed in either Mardilovich for performing the claimed function. At least for this reason, claim 12 and all claims dependent thereon are allowable.

Claim 16 has been amended to require that "the fuel cell stack has a configuration that defines flow passageways between the fuel cell stack and the substrate." Mardilovich does not teach this suggestion and neither Mardilovich nor Thirkkvalur can be used in an obviousness rejection of claim 16. Accordingly, claim 16 and all claims dependent thereon are in condition for allowance.

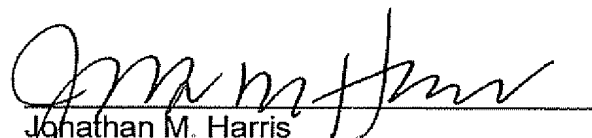
Claim 21 requires "at least a cathode material having a peak and valley configuration that defines integrated flow passageways between the fuel cell stack and the support." Thirkkvalur does not teach this configuration as explained above. In Thirkkvalur, the cathode material does not have a peak and valley configuration. At least for this reason, claim 21 and all claims dependent thereon are in condition for allowance.

III. CONCLUSION

In the course of the foregoing discussions, Applicant may have at times referred to claim limitations in shorthand fashion, or may have focused on a particular claim element. This discussion should not be interpreted to mean that the other limitations can be ignored or dismissed. The claims must be viewed as a whole, and each limitation of the claims must be considered when determining the patentability of the claims. Moreover, it should be understood that there may be other distinctions between the claims and the cited art which have yet to be raised, but which may be raised in the future.

Applicant respectfully request reconsideration and that a timely Notice of Allowance be issued in this case. It is believed that no extensions of time or fees are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required (including fees for net addition of claims) are hereby authorized to be charged to Hewlett-Packard Development Company's Deposit Account No. 08-2025.

Respectfully submitted,



Jonathan M. Harris
PTO Reg. No. 44,144
CONLEY ROSE, P.C.
(713) 238-8000 (Phone)
(713) 238-8008 (Fax)
ATTORNEY FOR APPLICANT

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
Legal Dept., M/S 35
P.O. Box 272400
Fort Collins, CO 80527-2400